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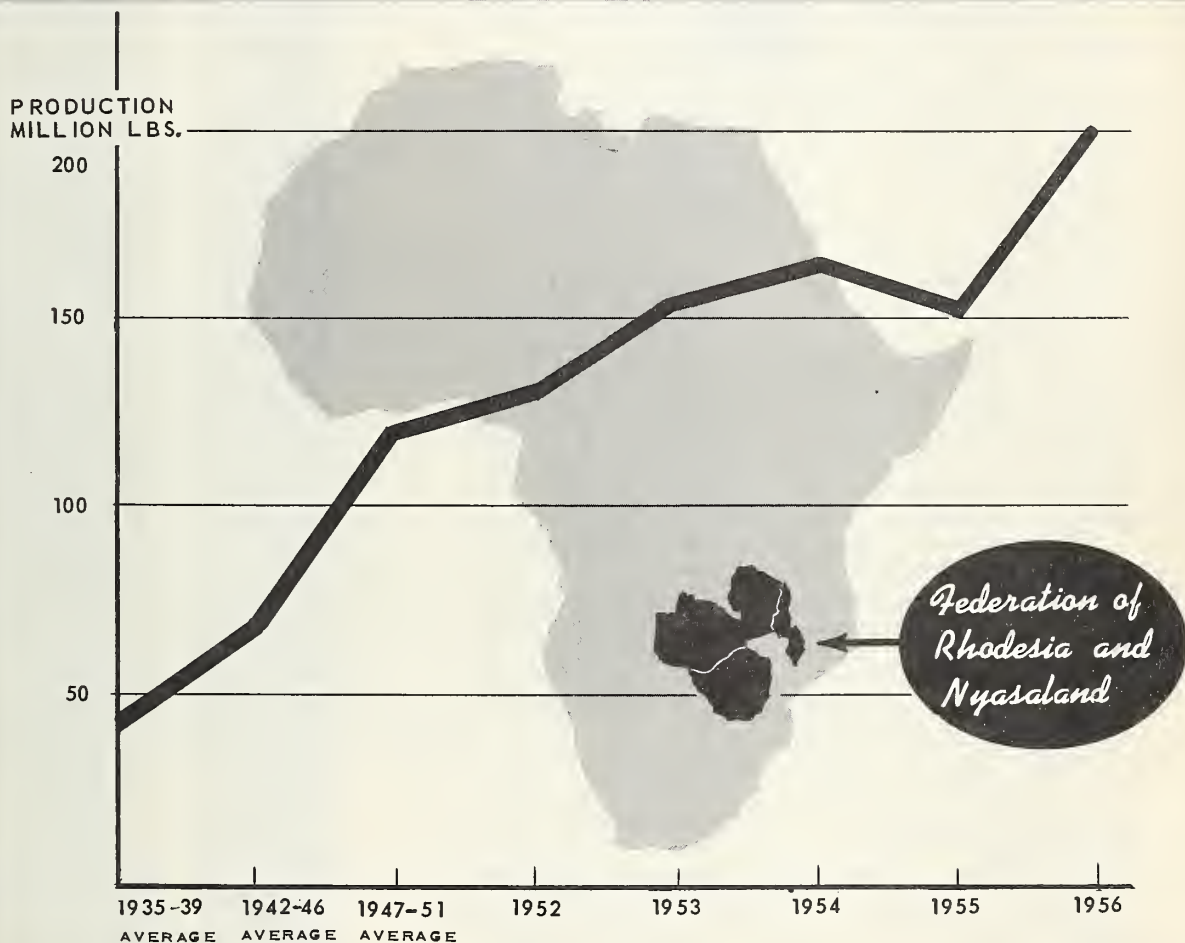
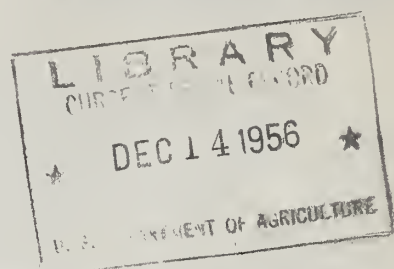
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COMPETITION STUDY

RHODESIAN TOBACCO

What it means to the American farmer



FOREIGN AGRICULTURAL SERVICE WASHINGTON, D. C.

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREIGN AGRICULTURE REPORT No. 94

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The Federation of RHODESIA and NYASALAND

Southern Rhodesia was first occupied by a Pioneer Column of South Africans in 1890. In 1923, it became a self-governing British territory. In 1953, proposals for a Federation comprising the self-governing colony of Southern Rhodesia and the Protectorates of Northern Rhodesia and Nyasaland were approved by all three territories and by the United Kingdom Government.

The Federation is situated in south-central Africa, within the Tropics and south of the Equator. The country covers an area of more than 485,000 square miles, or 2-1/2 times more than does the combined flue-cured area of the States of Virginia, North Carolina, South Carolina, and Georgia. The population is approximately 7 million, of which one-quarter million are Europeans.

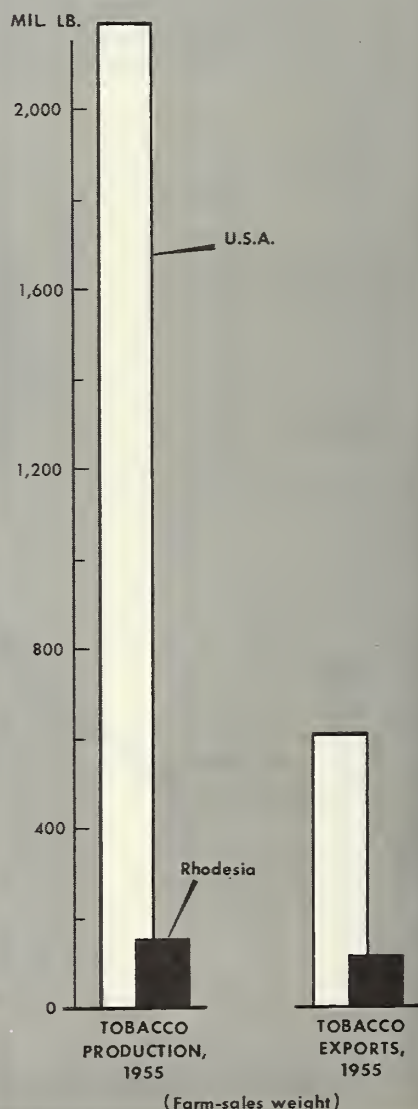
The Federation has no seaboard. The greater part of the country is 3,000 feet or more above sea level, and is composed of tree and brush-covered plains with large areas of open savannah. Mountains in the east rise to between 8,000 and 10,000 feet. The climate is mild. Rainfall averages about 30 inches a year, and occurs within a 5-month period.

The mineral wealth of the Federation greatly outweighs any other of its resources, with income from minerals exceeding \$325 million in 1954. Leaf tobacco ranks second. Over 90 percent of the tobacco, valued at \$70 million, is exported. This represents over three-fourths of total agricultural exports.

The Federation has become an important supplier of tobacco moving in international trade, and a major competitor of the United States and other countries producing flue-cured and fire-cured tobacco for export. Principal markets for Federation leaf include the United Kingdom, Australia, the Union of South Africa, West Germany, and the Benelux countries. Guaranteed markets exist for a major portion of the crop.

WORLD EXPORTERS
(1955 export weight)

	MIL. LB.
1. United States	540
2. Turkey	142
3. RHODESIA	124
4. Greece	121
5. India	87



Events leading up to the emergence of Rhodesia* as a major leaf tobacco exporting nation establish conclusively that the causes were politico-economic in nature.

This development was a natural outcome of the serious imbalance in international trade brought on by World War II. The major leaf tobacco supplying country, the United States, had been for some time operating with a large favorable balance of payments. There was little prospect of changing this in the immediate future.

Few industries have been in such a favorable position as the United States leaf tobacco export industry before World War II. There were no other large surplus producers of the high-grade flue-cured leaf tobacco that is in demand for the production of cigarettes. History has shown that quality domestic leaf could not be grown in the major tobacco importing countries.

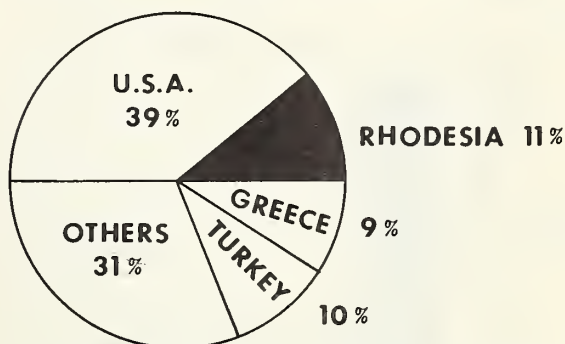
Such natural advantages as the United States leaf enjoyed could not, however, prevent the inevitable. The imbalance in international trade had to be solved either by international financial assistance from the United States or by quantitative restrictions on international trade by the deficit nations. As the former action offered no permanent solution, the latter could not be avoided.

Consumer demand for leaf, of course, was not impaired. In effect, a guaranteed market for a very large amount of leaf tobacco was open to any country which could supply it on a reciprocal trade basis. Rhodesia emerged as the principal beneficiary of the situation primarily because it would furnish reciprocal trade to the largest importer, the United Kingdom.

*Unless otherwise specified, the term "Rhodesia" in this report refers to the Federation of Southern Rhodesia, Northern Rhodesia, and Nyasaland.

I Rhodesia's Stake in Tobacco

Rhodesia has become an important supplier in international trade and a formidable competitor to other flue-cured and fire-cured producing countries. Rhodesian exports reached 132 million pounds (export weight) in 1954, or more than 10 percent of total Free World exports. This was four times the average exports of 1935-39. Even more significant is the Rhodesian share of the all-important flue-cured export market—16 percent.



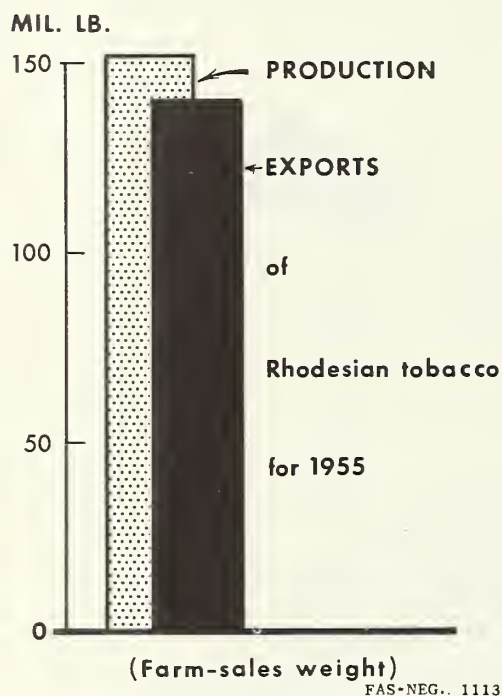
(Free World Tobacco Exports, 1955)

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Though increased Rhodesian participation has been less than the net gain in international trade and therefore has not affected the total trade of other countries poundage-wise, there is no question that had Rhodesia not entered the picture the United States would have supplied most of this tobacco.

From the domestic viewpoint, Rhodesia is in a vulnerable economic position. Tobacco plays a very large and important part in Rhodesia's over-all economy,

ranking second only to minerals in the value of production, and contributing about one-fifth of the total value of exports. Over 90 percent of the tobacco produced is for the export market. Slight adjustments in international tobacco trade may mean big adjustments in Rhodesia. Rhodesian tobacco farmers are not in a favorable bargaining position, since this leaf has no place to go other than to the export market. This situation bears a striking resemblance to the early years in the United States, when the tobacco industry depended largely on export trade with Europe.



Such a vulnerability inevitably puts the Rhodesian Government policy solidly and actively behind a bilateral approach to international trade, in contrast to the United States policy of looking toward the restoration of relatively free international trade. Each country feels that its respective policies are in its own best interests.

The lower average price being paid for the 1956 Rhodesian flue-cured crop

has caused internal economic problems. Most tobacco farmers are in debt to commercial establishments. The substantial drop in prices means a drastic reduction in the margin of profit for the grower and a corresponding difficulty in paying off these debts. Since the fast growth of Rhodesia has already caused a normal shortage of agricultural credit, the availability of operating capital now becomes a bigger problem for both agriculture and commerce.

II

Competitive Position of Rhodesia

The elements of competition that apply to international trade in leaf tobacco are simple but are often misunderstood. Involved in any sale are (1) one who has something to sell—the seller; and (2) one who desires to purchase—the buyer. If the buyer really wants a commodity, he must first face the element of quantity, or the situation as to the availability of that commodity. All other factors fade in significance until this one is satisfied.

Next come the two elements involved in paying for the commodity. The availability of foreign currency with which to buy foreign commodities in international trade is determined by the balance-of-payments position of the importing country. Price of the commodity enters next. The buyer must determine how much he can pay, based on his judgment of the reaction of ultimate consumers.

The last element that can be considered is that of quality. Some countries, of course, never have the opportunity to consider it in their purchases, being restricted by the previously stated considerations. It also has been demonstrated that this element can be almost totally disregarded where internal competition in sales is not a factor (as in the case of monopolies). For those buyers who can consider it, quality is a very important factor.

In addition to these natural economic factors, international trade must face

political problems. Political aspects of international trade are dominant. In foreign trade, economics cannot be divorced from politics. Governmental policy's influence on the direction and volume of international trade in tobacco is often merely an extension of the natural factors of competition. For example, a shortage of foreign currency may develop. The buying government may, as a result, put restrictions of one sort or another on expenditures for tobacco.

Often, however, governmental policy is completely arbitrary, and is aimed at directing trade toward particular countries regardless of normal commercial considerations. Such action on the part of tobacco exporting countries is for the purpose of gaining guaranteed markets for leaf. Rhodesia, for example, has put extreme pressure on the United Kingdom to obtain a guarantee of purchase. This guaranteed purchase arrangement, which presently covers a 3-year period, coupled with the umbrella of price support on competing leaf tobaccos of the United States, has been an effective profit guarantee to the Rhodesian grower. As a result, Rhodesian flue-cured production has increased five-fold since prewar.

The Buyer's Situation

The volume of international trade is determined by the buyer's need and not the seller's stock. In 1955, more than one billion pounds of leaf were imported by countries that produce less than they consume. About one-third of this total was imported by the United Kingdom, a member of the sterling bloc and a market for quality leaf. All members of the sterling bloc together took nearly one-third of total world imports. European countries together took nearly three-fourths of world imports.

Leaf buyers in 1956 face a favorable situation. (1) There is more leaf available for export than buyers need. As a result, buyers may pick for quality. (2) There is ample quality tobacco available. As a result, buyers who desire quality leaf may safely ease

back on the buying pressure and therefore buy at a cheaper price in those countries where tobacco is not protected by guaranteed price support. It is inevitable that prices will, at the least, seek reasonable levels. Lower prices in the marketplace, coupled with surplus stocks, often lead to distress selling by some producer countries, which only serves to further depress the market.

This means that either Rhodesian leaf tobacco must compete in world markets on the basis of quality and price or else Rhodesia must resort to bilateral trade agreements.

How Rhodesian Leaf Compares

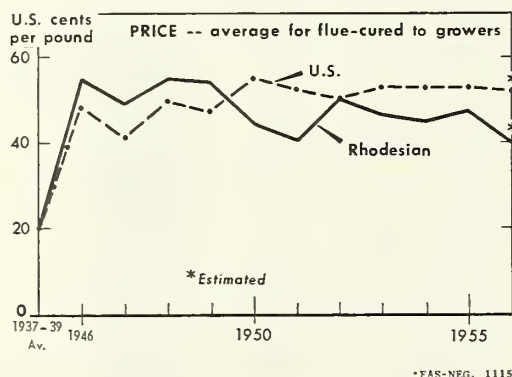
In quality, Rhodesian leaf tobacco is excelled only by that grown in the United States and Canada. Color is a necessary requirement in the countries that prefer the all-flue-cured cigarette, and is desirable in all markets. Rhodesian flue-cured leaf offers good color characteristics throughout the entire price range and, as a whole, probably excels competitors in this quality factor.

The primary quality markets for flue-cured—the United Kingdom, Australia, New Zealand, and Ireland—desire body in their tobaccos. In this characteristic, United States leaf excels Rhodesian. An all-Rhodesian-leaf cigarette fails to give satisfaction to many smokers. The percentage of Rhodesian leaf which these quality markets like to buy is therefore limited.

Aroma and flavor are necessary characteristics in all markets for flue-cured leaf. Rhodesian leaf makes a fairly neutral smoke. United States leaf stands by itself in this characteristic of flavor. It is therefore necessary to use at least some United States leaf. The higher the quality of the market, the less neutral tobacco the leaf buyers feel can be utilized.

In price, Rhodesian leaf has many advantages. Rhodesia shares with other British Commonwealth producers the Empire preference in import duties. This, in effect, gives Rhodesian tobacco the equivalent of 21.5 U.S. cents a pound advantage over non-Commonwealth

tobaccos in the United Kingdom market. It is, other things being equal, 8 cents cheaper in the Australian market. In addition to this price advantage in certain Commonwealth countries, Rhodesian flue-cured leaf sold for an average of 6.5 cents a pound below United States leaf during the past 3 years. In 1956 the Rhodesian crop of flue-cured is selling at approximately 8 cents a pound below the previous year or some 12 cents below the present 1956 United States flue-cured average. This drop is attributed primarily to two factors: (1) Lack of sufficient quality tobacco for United Kingdom buyers, and (2) an oversupply of leaf.



Average crop prices do not tell the whole story. Market prices for higher quality flue-cured leaf in Rhodesia have been above the prices for comparable tobaccos in the United States. These grades of Rhodesian leaf are still cheaper than United States leaf in the United Kingdom after the duty preference is taken into consideration. Market prices for lower quality Rhodesian flue-cured leaf are considerably below those for lower quality United States leaf. These tobaccos are not strictly comparable because of the better flavor and body of United States leaf. Some strengthening of prices on the Rhodesian auction market for the 1956 crops was noted, however, after the opening of United States leaf auctions showed strong demand and

accompanying higher prices on low-quality leaf.

Buying Agreements

The theory that pricing is the answer to all international trading problems has many serious advocates. Pricing is important depending upon the buying market. But much more important are the particular intra-nation trading situations involved. The high percentage of leaf tobacco that moves under trading arrangements indicates the strength of foreign opinion as to the necessity of maintaining this bilateral trade.

Rhodesia is no exception. Since the close of World War II, it has been actively engaged in promoting the bilateral approach to export movement of its leaf tobacco. At present it has four individual agreements with tobacco importing countries. These agreements vary in form and detail, but all have the same primary purpose—to provide a guaranteed export outlet for the maximum possible volume of leaf.

The United Kingdom has a 3-year agreement with Southern Rhodesia, under the terms of which British tobacco manufacturers agree to purchase certain minimum amounts of flue-cured tobacco from each crop. The agreed quantity for 1956 is 83 million pounds.

Australian tobacco manufacturers have an agreement to purchase a minimum of 9.7 million pounds or 6-1/2 percent of the crop, whichever is less.

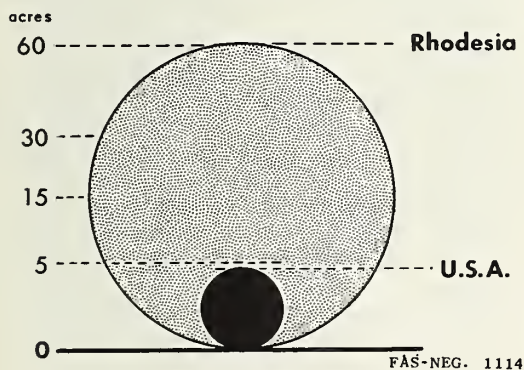
A 5-year trade agreement with the Union of South Africa, effective July 1, 1955, includes a provision permitting the duty-free entry of specified minimum quantities of tobacco from the Rhodesias and Nyasaland into the Union annually. The minimum specified quantity, as provided for in the agreement, is 2 million pounds. This quantity may be increased as mutually agreed by the two governments. Latest reports state that the duty-free quota for 1956 is 14 million pounds, but this is subject to further revision. (This duty-free quota arrangement is an extension to the Federation of Rhodesia and Nyasaland of previous agreements the Union had negotiated with

Southern Rhodesia and Northern Rhodesia in the 1930's, also providing for the duty-free entry of leaf tobacco.

A trade agreement with France provides for the importation by France and its colonies of Rhodesian tobacco valued at the equivalent of \$1.2 million, in exchange for increased purchases of French perfumes, wines, cigarette papers, and other luxury goods.

Outlook

The outlook for increased production of flue-cured leaf tobacco in Rhodesia is subject to many qualifying conditions. Physically, there is much room for expansion since there is much unused land. However, most of the land in the present area of flue-cured tobacco production is in very large farms. Most of these farms are already growing tobacco in as large an acreage as can be efficiently cultivated. There are no land taxes. Therefore, there is no compulsion for the owners to break up these large farms. Most new growers are compelled to go into outlying areas for land. As production begins to exceed world demand and prices drop accordingly, many of these new farmers will not be able to produce at a profit. The recent drop in auction prices paid in Rhodesia for the 1956 harvest will probably slow the expansion of tobacco acreage.



Prospects for continued exports of a reasonable amount of Rhodesian flue-cured leaf are very good. World demand for lighter cigarette tobaccos promises to continue its steady increase for some time to come. The United Kingdom continues its 3-year buying agreement with Rhodesia for about 80 million pounds a year. Continental Europe will continue to grow less cigarette leaf than it consumes. Consumer resistance or governmental ceiling prices on tobacco products keeps most European nations from paying high prices for leaf. An acceptable quality cigarette can be made by using some neutral leaf tobacco such as Rhodesia produces.

All these factors favor export demand for Rhodesian flue-cured up to about the present level of 140 million pounds, farm-sales weight, per year. At the present level of world consumption, export supplies in excess of this would compete with the much lower-quality leaf produced in such countries as India and Thailand. Successful competition in this field means a drastic lowering of prices.

III

Production

Total production of leaf tobacco in the Federation during 1956 reached a record 200 million pounds. Production of flue-cured, the most important type, was approximately 166 million pounds, up 26 percent from 1955. This leaf is grown on soils ranging from sandy loam to heavy clay. Southern Rhodesia furnished 91 percent, mostly from the Salisbury area. Northern Rhodesia grew 7 percent in the western area along the Livingstone-Lusaka railroad and in the eastern area around Ft. Jameson. Nyasaland grew 2 percent.

The acreage of Southern Rhodesian flue-cured tobacco harvested in 1956 was 20 percent above that of 1955, and the average yield rose to 760 pounds an acre—an alltime high. This yield was 7 percent above that of 1955 and

about 20 percent above the average of 1947-51, but was still only one-half the 1,497-pound average yield in the United States for 1955.

Fire-cured production in the Federation reached approximately 27 million pounds in 1956. Nyasaland furnished nearly all of this type; Southern Rhodesia produced only 300,000 pounds.

Oriental leaf production reached 200,000 pounds. There is increased interest in this type to be grown for the United States market.

Costs of Production

Production costs per acre of flue-cured leaf have been reported by farmers as ranging from \$180 to \$300 per acre. A cost of \$225 was typical. This was based on an average yield of 600 pounds of leaf per acre. This is an equivalent of about 37.5 U.S. cents per pound. The native labor costs involved represent much work on other farm activities, as the native is kept year-round. Costs are rising but increasing yields will tend to somewhat offset these.

IV

Marketing

Producer

Except for a small amount in Nyasaland, all flue-cured marketed by producers goes through two privately owned loose-leaf auction warehouses in Salisbury, Southern Rhodesia. The leaf is baled in paper and burlap on the farm or in commercial grading sheds and shipped by rail or truck to market. The bales are opened at the top for the auction sale and resewn before shipping. Redrying facilities are located in the market cities.

Fire-cured leaf is grown mostly by natives in Nyasaland and head-carried to the African Tobacco Board sheds. This Board directs the production on Native Trust land and purchases the leaf. The Board then grades and bales the leaf for sale on the Limbe auctions. The profit is used for general welfare.

Turkish leaf is grown under contract and delivered on the string.

Buyer

Domestic manufacturers produce two qualities of cigarettes, the native brand very low priced. Over 90 percent of the flue-cured leaf of Rhodesia is purchased for export. After redrying and repacking, this leaf is shipped by rail to a seaport in Mozambique or South Africa. The United Kingdom is the destination of two-thirds of the total. Australia, the Netherlands, Germany, Denmark, and the Belgian Congo account for most of the rest.

Governmental

As a result of the drastic drop in price for the 1956 crop, the Rhodesian Tobacco Association requested the Federal Government to appoint trade commissioners to intensify demand in foreign countries. Such a mission has begun foreign travel with full powers to negotiate agreements. It is probable that government will play a more important role in this regard in the future.

V

Government Influences

Governmental influences bearing on Rhodesian tobacco manifest themselves in several ways. By far the most important has been the strong pressure to purchase Rhodesian leaf that the Federation Government has put upon members of the sterling bloc. Intense pressure has been applied to the United Kingdom; agreements have been signed which, in effect, provide guaranteed export outlets in the United Kingdom, Australia, and the Union of South Africa.

The most recent action in the marketing field has been the appointment of trade commissioners with travel authority and with full powers to negotiate actual sales agreements with foreign buyers.

Production assistance is restricted to the extension specialist system such as is used widely in the United States. The research stations were at one time government-controlled but are now under producer control.

A very limited number of licenses has been granted for leaf auction warehouses. One result has been that leaf-handling problems resulting from the uneven flow of cured tobacco to market have been shifted to the farmer, rather than to the auction warehouses and buyers as in the United States.

The record 1956 harvest of flue-cured tobacco in Rhodesia—some 25 percent above the previous season—has caused the Rhodesian Government much concern. Average prices received by growers have been considerably lower than those during the previous year. Difficulties in finding markets for some of the low and medium grades are anticipated. The

Minister of Agriculture has stated that it is the policy of the Federal Government to assist growers in their present marketing problem. It is apparent that efforts to push export sales will be intensified. These efforts will include the expansion of regular commercial sales in present market outlets, and the opening of new outlets, particularly in non-Commonwealth countries. The bilateral trade agreements approach will also be utilized more fully, particularly with those countries with which Rhodesia has unfavorable trade balances. Latest information indicated that attempts would be made to conclude trading arrangements with several Iron Curtain countries, including East Germany. Results of these intensified efforts to dispose of the Rhodesian tobacco crop, with the exception of a sale of 500,000 pounds to Hong Kong, have not been announced.

APPENDIX

A. Buying Agreements for Rhodesian Tobacco

Existing purchase arrangements for Rhodesian tobacco include the following:

(1) A 3-year agreement between the Southern Rhodesian Tobacco Marketing Board and the Tobacco Advisory Committee to the British Board of Trade guaranteeing the annual purchase by the United Kingdom of specified minimum quantities of flue-cured tobacco, with certain stipulations;

(2) A bilateral trade agreement with Australia guaranteeing the purchase by that country of 9.7 million pounds of tobacco annually or 6-1/2 percent of the crop, whichever is less, with continued preferential tariff treatment for this tobacco;

(3) An arrangement with the Union of South Africa, under terms of which

a minimum of 2 million pounds of tobacco is permitted to enter annually into the Union duty-free, with a further provision that the quantity may be increased as conditions warrant; and

(4) A trade agreement with France, providing for the importation by France and its colonies of tobacco valued at \$1.2 million annually, in exchange for increased Rhodesian purchases of French perfumes, wines, cigarette paper, and other luxury goods.

United Kingdom Agreement

The agreement that has been of greatest significance in international trade in tobacco is the one with the United Kingdom. Negotiations for it began in 1947. Then, there was a shortage of tobacco, particularly of flue-cured tobacco, available for export in most producing countries. The United States held by far the largest supply. But the most important market—the United Kingdom—was suffering from an acute shortage of dollars, and

was not in a position to spend its dollar holdings to buy the required quantities of tobacco. The United Kingdom tariff on tobacco had been increased substantially in April 1947, as a means of reducing consumption and thus relieving some of the need to purchase large quantities in the United States. At the same time, the Rhodesian industry was ripe for expansion, with large land areas suited to the production of a much larger tobacco crop than had been grown up to that time. Conditions were suitable for some sort of arrangement between the mother country and the overseas producers of a commodity in great demand.

In the late months of 1947, a delegation representing the Southern Rhodesian Tobacco Marketing Board was sent to London for consultations with the Tobacco Advisory Committee to the Board of Trade, representing United Kingdom tobacco manufacturers. An agreement was signed in January 1948, under the terms of which Southern Rhodesian tobacco growers agreed to increase their flue-cured crop to at least 70 million pounds, and British manufacturers undertook to purchase a minimum of two-thirds of the crop (about 46 million pounds) annually for the next 5 years, i.e., for 1948-52. (The guaranteed quantities for purchase were on a farm-sales-weight basis.) The minimum purchases were assured if—

- (1) Sufficient quantities of suitable grades were available,
- (2) Prices were reasonable, and
- (3) Consumption in the United Kingdom did not decline.

In order to provide the Rhodesian tobacco grower with a greater sense of security, the Tobacco Advisory Committee declared its willingness to renew the consultations from year to year, with a view of settling a 5-year program each year. A further provision stated that, even though a fall in tobacco consumption in the United Kingdom occurred, manufacturers were prepared to take a minimum of 40 million pounds annually. Export controls on the movement of Rhodesian

leaf were to be continued, in order to insure the availability of supplies for the United Kingdom market.

Since the original agreement was ratified, in early 1948, several important modifications in its provisions have been made. Quantities to be purchased by the United Kingdom were placed on a specific rather than percentage basis, beginning with 1951. For 1951 the quantity to be purchased was agreed at 75 million pounds; for 1952, 80 million; for 1953 and 1954, 85 million; and for 1955, 80 million. Even though an appreciable decline in United Kingdom consumption should occur, the manufacturers were prepared to buy 85 percent of the figures quoted above. Export controls were abolished in 1952. In late 1953 the figures covering purchases were modified as follows: For 1954 and 1955, 85 million pounds; and for 1956-58, 80 million pounds.

Conditions in the United Kingdom cigarette trade—both in domestic sales and in exports—changed in 1953 and 1954. Under the circumstances the Tobacco Advisory Committee felt obliged to reduce the period of guaranteed purchase. Talks were held in London in early 1955, with a view to this end, although the existing agreement covered purchases through 1958. The Tobacco Advisory Committee suggested, and representatives of the Rhodesian growers agreed, that the period of guarantee be shortened to 3 years. No change was made in the previously agreed quantities to be purchased through 1958. (Before the 1956 sales season opened, purchases from the 1956 harvest were agreed at 83 million pounds.) It was further agreed that, beginning in July 1956, United Kingdom manufacturers would undertake to advise the Southern Rhodesian Tobacco Marketing Board of their latest estimate of needs from the 1959 Rhodesian crop. In July 1957, they would similarly estimate their needs from the 1960 harvest, and revise their previous estimate of 1959 requirements. This is the present status of the original agreement.

Southern Rhodesian exports of flue-cured tobacco to the United Kingdom,

for specified years, are shown in the following tabulation:

Year beginning April	Quantity (export wt.) Million Pounds
Average 1935-39	14.3
1944.	11.4
1945.	25.3
1946.	19.0
1947.	29.1
1948 ¹	41.4
1949.	46.1
1950.	61.1
1951.	42.7
1952.	54.3
1953.	52.9
1954.	63.9
1955.	54.4

¹First year of purchase agreement.

Various spokesmen for both British manufacturers and Rhodesian tobacco growers have praised the objectives of the Southern Rhodesian-United Kingdom purchase agreement. The Chancellor of the Exchequer, in a statement made in the House of Commons on June 1, 1948, suggested that the agreement was a satisfactory substitute for a substantial tariff preference in favor of Rhodesian leaf. He stated "I think that is the only way and much the best way of substituting what used to be done by a large preference." Spokesmen for Rhodesia have likewise stressed the value of the purchase agreement on numerous occasions since its inception.

The minimum agreed quantities of leaf to be bought each year exceeded actual purchases, mainly because sufficient quantities of the grades desired by British manufacturers have not been available. Specifically, they have not been able to purchase quantities having sufficient body. During the past several marketing seasons, United Kingdom purchases have averaged about 75 percent of the guaranteed quantities. Nevertheless, British takings of Rhodesian tobacco since 1948 have been stepped up sharply.

Australian Agreement

The following tabulation shows Southern Rhodesia's exports of leaf tobacco to Australia for specified years:

Year beginning April	Quantity (export wt.) Million Pounds
Average 1935-39	0.1
1944. . . . .	.3
1945.	2.7
1946.	1.6
1947.	3.0
1948 ¹	6.3
1949.	4.4
1950.	6.1
1951.	4.4
1952.	7.0
1953.	8.5
1954.	11.0
1955.	11.0

¹Year purchase agreement negotiations undertaken.

In the late months of 1948, Australian tobacco manufacturers made known their desire to sign an agreement with Southern Rhodesian tobacco producers similar to the one that had been recently concluded with the British industry. In 1950 the agreement was formalized. It provided that Australian tobacco manufacturers would undertake to purchase 6-1/2 percent of the Southern Rhodesian crop, if prices were reasonable and the volume of desired grades was available.

In 1951 the Australian agreement was amended, so that instead of taking 6-1/2 percent of the crop, subject to the usual price and quality clauses, the following quantities would be purchased during the next 5 years: 1951, 8.3 million pounds; 1952, 9.0 million; 1953, 9.6 million; 1954 and 1955, 9.7 million pounds or 6-1/2 percent of the crop, whichever was less.

In late 1953 the 5-year agreement was reviewed and extended to cover the period 1954-58. Revisions made at that time provided for the purchase of 9.7 million pounds each year during the period or 6-1/2 percent of the annual

crop, whichever was less. Recent information indicates that the agreement is now to be on a 3-year basis.

Australian imports of Rhodesian tobacco have been increasing rapidly since the purchase agreement was concluded. (The preference of nine-pence per pound—about 8.4 U.S. cents—also has encouraged larger takings of Rhodesian leaf.)

Union of South Africa Agreement

During the 1930's the Union of South Africa concluded agreements with both Southern and Northern Rhodesia, providing for the duty-free entry into the Union of tobacco produced in those two countries.

The agreement with Southern Rhodesia provided that after June 30, 1936, the Union's Tobacco Control Board would determine the quantity of Rhodesian flue-cured tobacco that could be imported into the Union duty-free during any 12-month period commencing July 1. For the purpose of making such determination the Board would take into consideration (1) the quantity needed, (2) purchases in the Union during the preceding 12 months, (3) unsold stocks in the Union, and (4) the quantity to be imported from Northern Rhodesia.

The original agreement with Northern Rhodesia was entered into in 1930, and provided for the duty-free importation from that country of 400,000 pounds of leaf tobacco during the 12-month period beginning July 1 of each year.

On July 1, 1955, a new trade agreement between the Union of South Africa and the Federation of Rhodesia and Nyasaland came into force. This agreement extended duty-free treatment to tobacco produced in Nyasaland and continued it for leaf produced in the Rhodesias. The agreement provided, in article 3, for the duty-free importation of 10 million pounds of Federation leaf during the period July 1-December 31, 1955. It also stated that after December 31, 1955, the quantity to be admitted duty-free would be a minimum of 2 million pounds in each calendar

year. Additional quantities could be admitted free of duty, as determined by the Minister of Agriculture of the Union, after consultations with the Minister of Agriculture of the Federation.

The total quantity to be admitted duty-free each year (aside from the minimum as set forth in the agreement) depends largely upon the supply situation in the Union. The effect of this proviso is to furnish the tobacco producers of Rhodesia with a virtually guaranteed outlet for variable quantities of leaf, on a preferential basis. (The tariff rate on dutiable tobacco is the equivalent of about 49 U.S. cents per pound.) The latest reported duty-free quota on the Union's 1956 imports from the Federation is 14 million pounds.

Imports of tobacco into the Union from the Federation consist largely of flue-cured leaf produced in Southern Rhodesia. The following tabulation lists Southern Rhodesian exports of this type of tobacco to the Union for a number of recent marketing years:

Year beginning April	Quantity (export wt.) Million Pounds
Average 1935-39	2.4
1944	10.6
1945	2.0
1946	3.6
1947	5.1
1948	2.6
1949	4.5
1950	3.2
1951	2.5
1952	1.9
1953	1.0
1954	1.4
1955	8.9

French Agreement

During recent years, France has had a bilateral compensation agreement with Rhodesia, covering the importation of Rhodesian tobacco by France and the French Union, in exchange for French wines, cigarette paper, and other luxury items. In 1952-53 and 1953-54, there were separate agreements with Southern

Rhodesia and Nyasaland. After the Federation of Rhodesia and Nyasaland came into being, an agreement was concluded with the Federation as a whole.

Early in 1955 the French-Federation agreement for the calendar year 1955 was renewed on an expanded basis. It provided for the importation by Metropolitan France and its colonies of tobacco valued at £430,000 (US\$1.2 million). About two-thirds of this value was to be expended for flue-cured leaf, and the balance for fire-cured. (Information regarding the renewal of the agreement for 1956 is not available, but it is presumed to be still in force.) Exports of unmanufactured tobacco from Rhodesia to France and its colonies totaled 0.7 million pounds in 1953, 1.9 million in 1954, and 1.7 million in 1955.

B. Leaf Production by Type

FLUE-CURED

Southern Rhodesia

Flue-cured is the most important type grown in the Federation, and Southern Rhodesia is the most important producing area. It accounted for approximately 90 percent of the total 1956 flue-cured crop.

Southern Rhodesian farmers grow tobacco on a large scale through the use of hired workers. The typical farm is about 2,400 acres, with all but about 300 acres in pasture, mostly for cattle. The crops include about 65 to 70 acres of tobacco, 70 acres of corn, and 70 acres of various others.

Major Production Costs.—The average cost of producing flue-cured leaf is estimated by tobacco specialists of the Southern Rhodesia Department of Agriculture at about \$225 per acre, or the equivalent of 37.5 U.S. cents per pound (based on a 600-pound yield, farm-sales weight). On the basis of this cost and the average price of 46.3 U.S. cents received in 1953, the typical operator would have realized a net

profit of about \$51.50 per acre of tobacco, or a total of \$3,400 from 66 acres of tobacco per farm. The average cost of production estimated by growers and government tobacco specialists may be high, for on many farms the workers perform work on other crops and livestock enterprises and frequently contribute to extensive farm improvement programs.

Table 1.—Typical proportions of principal tobacco-farming expenses in the Federation of Rhodesia and Nyasaland¹

Item	Percentage of total cost
Native wages and purchased rations (Native wages only 17-19 percent)	26-28
European salaries and bonuses	8-28
Initial allowances and depreciation	9-10
Motor vehicles, fuel, and running (Motor vehicles, fuel only 4-6 percent)	9-10
Fertilizers	5-7
Tobacco selling and levy	4-8
Repair and renewals	2-4
Hessian, paper, and twine	1-2
Insurances	1-2

¹See "The Economics of Tobacco Farming" by Dr. William E. Haviland (now Associate Professor of Economics, McGill University in Canada, who made a comprehensive study of tobacco farms in Southern Rhodesia in 1952), *Rhodesian Tobacco*, No. 3, December 1953.

By far the largest cost item is hired labor. The native labor supply on the typical tobacco farm described above would probably be about 35 adult males, of whom 20 would be married. Some wives and older children help with the transplanting, harvesting, and sorting. The natives in the flue-cured area receive approximately \$6.50 per month plus a fixed amount of meat and grain supplies, which is equivalent to about \$11.50 to \$13.00 per month.

Managers of the farms are almost all Europeans whose salary is approximately \$2,800 per year. This includes a bonus that probably averages about \$1,700.

Housing for the managerial personnel and native labor is provided on the farm. Native workers frequently construct their own huts, but the manager's house may cost from \$1,500 to \$6,000 and, if there is an assistant manager, he is also supplied with a somewhat less expensive house.

Because of the rainfall pattern, practically all farms have one or more bore

holes, or wells, which furnish water for tobacco. The wells are approximately 100 feet deep and cost around 30 shillings (\$4.20) per foot to drill. The total cost to drill a well and install the necessary pipe varies between \$500 and \$1,400 with the average at about \$1,000. Many tanks (ponds) have been built at a cost of about \$850, although many larger dams are more costly.

Little fertilizer is now used, but its use is expanding rather rapidly. A great amount of research is being done on the most appropriate mixtures for use on each major soil type. Prices of fertilizers are fairly high and there is such a wide range in the amounts of fertilizer applied per acre by the various growers that no cost per farm can be said to be typical.

Production Method.—Seedbeds are established in August and are watered, usually by hand, until the seedlings are large enough to be transplanted, as there is practically no rain from April 1 until October. In watering and in transplanting, care must be taken to avoid introducing eelworms (nematodes).

The typical rainfall pattern in the most important flue-cured area of Southern Rhodesia is indicated below.

<u>Period</u>	<u>Inches</u>
November	4
December	7
January.	8
February.	7
March.	4
Remainder ¹	3
Total	33

¹Mostly in April and October.

Transplanting frequently is "staggered" over a fairly long period, beginning sometimes in October and extending into December. This is done to reduce the weather risk and spread the harvest and curing time over a long period. The harvest is a time of peak labor requirements, and available barn space limits the amount that can be cured simultaneously.

Curing and Grading.—Wood is used for curing because it is relatively cheaper and is found on most farms.

Including labor costs for chopping and hauling, it costs \$2.80 to cure the contents of a barn with the capacity of 1,000 pounds of tobacco. To perform the same operation using coal would cost \$14.00 per 1,000 pounds or 1.4 U.S. cents per pound. Recently, there has been a shift to increased use of oil for curing, partly because wood is scarce in many areas and supplies of coal are not always assured owing to the shortage of railroad transportation.

Grading, like transplanting, must be closely supervised. In a grading shed with 1 to 4 European supervisors and 100 natives an average of only about 3,000 pounds per day is handled. A considerable portion of the leaf is commercially graded at a cost of 4.6 to 5.0 U.S. cents per pound for grading and baling.

Equipment.—The field equipment needed usually includes a pickup truck, tractor, plows, disc, harrow, trailer, etc., which initially costs from \$6,000 to \$8,000.

On the typical farm there are two units with four barns 16 feet by 16 feet in each unit. The barns are made of brick and each have their own heating unit. The average curing unit of four barns each costs about \$2,000. In years when yields are above average, there is considerable loss from a shortage of curing barns. It is recommended that there be at least one barn for each 6 acres of tobacco, but usually there is less barn space per acre than this.

Marketing.—With the exception of Turkish, all tobacco in Southern Rhodesia and the northwestern part of Northern Rhodesia is sold by auction in Salisbury. Redrying facilities are located near the two large modern auction warehouses. The leaf is baled on the farm or in commercial grading sheds and shipped to the auction to be sold in this form. The tobacco for export, except that shipped to the Union of South Africa, is sent by railroad to the east coast ports of Beira or Lourenço Marques, Mozambique (Portuguese East Africa) where it is loaded on ships.

Southern Rhodesian flue-cured is a neutral filler, which is not comparable

to U.S. leaf in flavor, aroma, oil content, and texture. Much of the leaf is bright in color, although disease and poor curing frequently result in many dark or spotted leaves. Prices paid for the better grades of Southern Rhodesian flue-cured are higher than those paid for the better qualities of U.S. leaf; tobaccos from the two are not comparable, however, in regard to a number of characteristics. Prices paid for the medium and low grades of tobacco are usually lower than for the medium and lower qualities of U.S. flue-cured. The estimated average auction price for flue-cured was equivalent to 39.8 U.S. cents per pound in 1956 compared to 52.0 U.S. cents per pound for the same period on U.S. flue-cured markets.

Varieties.—There is a greatly expanded research program on new varieties. Previously the leading varieties have been Hicks and White-Stem Orinoco with Delcrest, Bonanza, and Jamaica Wrapper accounting for the remainder. There is a vigorous program to develop higher yielding varieties which will produce a high proportion of bodied leaf suitable for the United Kingdom and other markets of Western Europe.

Northern Rhodesia

Northern Rhodesia usually produces 8-11 million pounds of flue-cured. It has only two important flue-cured producing areas: The eastern, around Ft. Jameson, and the western, which extends along the railroad from Livingstone in the south to Kapiri Mposhi in the north. Most of the expansion in recent years has been in the western area. Tobacco competes for land with peanuts, corn, and certain other crops. There is keen competition for labor by the mines, industrial manufacturers, and service-type businesses in urban areas. By improving yields, output of tobacco can be economically expanded to a substantial degree.

Labor.—Labor costs and problems are similar to those in Southern Rhodesia, but the new explorations and development of the vast mineral wealth of this area are demanding more and more of the labor supply. Rising wage

rates for native labor will raise per unit costs unless labor is more efficiently utilized and yields of leaf increased. Lack of experienced supervisors and poor performance of unskilled native laborers are important aspects of the production problems.

Production Method.—The methods of production in Northern Rhodesia are relatively the same as those used in Southern Rhodesia, but the planters have to be particularly careful because the area is heavily infested with eelworms. The soil is prepared about the same as in other areas, but plants are set on ridges to insure good drainage, as rains are occasionally heavy during the growing season.

Although some producers use little or no fertilizer, others use several hundred pounds per acre and the amount used is rising. Fertilizer prices are somewhat higher than in Southern Rhodesia, largely because of additional transportation costs.

In order to obtain the bodied leaf desired by the United Kingdom, the plants are topped when the flower appears or even while a majority of the plants are in the bud stage which is at an earlier stage of growth than in the United States.

After tobacco is cured, it is bulked, graded, and baled as in Southern Rhodesia.

Marketing.—For marketing, baled leaf from the northwestern area is moved by truck to Salisbury in Southern Rhodesia, where it is sold at the same auctions as the Southern Rhodesian leaf. Before 1956 all Northern Rhodesian leaf was labeled as such. Formerly some buyers claimed that the leaf from the eastern part of Northern Rhodesia had poor burning qualities and they discriminated against it by offering lower prices. This year flue-cured leaf from the northwestern part of Northern Rhodesia was sold unlabeled with the Southern Rhodesia leaf, but flue-cured from the northeastern part of Northern Rhodesia is still labeled as originating in that area.

The prices received for flue-cured produced in the eastern area of Northern Rhodesia have been fairly low in relation to prices received in Southern Rhodesia as well as in Nyasaland.

Nyasaland

Flue-cured tobacco in Nyasaland is produced on European estates. Production has been rising and has averaged 3-4 million pounds annually in the last 5 years. This year's crop at 4.3 million pounds is about equal to that of 1954 and well above that of 1955.

Production Costs.—Production practices are about the same as in Northern and Southern Rhodesia; however, native wage rates are somewhat lower in Nyasaland as this is a labor surplus area. The native adult male gets a total wage equivalent to about \$9.50 or \$10.00 per month.

The prices of fertilizer and manufactured goods are considerably higher than in Southern Rhodesia, largely owing to increased freight rates because these products are transported for longer distances.

Marketing.—There are two large warehouses in Limbe, and leaf tobacco is handled in bales as in Southern and Northern Rhodesia. European producers sell their tobacco directly from the auction floors. The dark tobacco grown on Native Trust land is produced under the direction of and purchased by the African Tobacco Board. The Board grades and bales the dark leaf and sells it on the Limbe auctions. The natives are paid when the tobacco is delivered to the Board on the basis of prices by grades established earlier by the Board. Most of the exports move by rail from Limbe in Nyasaland to ocean ports in Mozambique.

Quality and Use of Leaf.—Nyasaland's flue-cured leaf is a good bright color and has a pleasant aroma; however, some buyers claim that it has a very distinctive flavor which limits its use in cigarettes. Most of the Nyasaland flue-cured is reported as used in smoking and chewing tobacco rather than in cigarettes, but the author was not able to check the accuracy of this statement.

OTHER TYPES

Dark fire-cured and sun-cured rank second in importance to flue-cured in the Federation. Ninety-five percent of the Federation dark leaf is produced in

Nyasaland. Extreme variations in weather conditions cause a wide variation in leaf quality over a period of years. The largest center of production in Nyasaland is in the Central Province near Lilongwe.

Fire-Cured

Most of the fire-cured is produced by natives, who cultivate a very small acreage per family. But small quantities are produced by tenants and hired workers on estates. The majority of workers on the Native Trust land are women. Most of the work of preparing and cultivating the fields is done with short-handled hoes. However, the African Tobacco Board, through training and introduction of new methods, is improving production practices and quality. This area has adaptable soils and available labor which are adequate for a considerable expansion of tobacco production.

Little or no fire-cured leaf is grown in Northern Rhodesia, nor has its production ever been important in Southern Rhodesia.

The average yields per acre of fire-cured have been about the same as for flue-cured. The average prices of fire-cured, however, have always been much lower than those for flue-cured. As profits on flue-cured are higher than for fire-cured the latter type is at a competitive disadvantage in areas where flue-cured can be produced successfully. However, there is a limit to demand for flue-cured. Production of fire-cured could be expanded if export demand warranted it.

Most of the dark-fired leaf in Southern Rhodesia is grown in the Shamva area and is reported by buyers as normally less desirable than Nyasaland fire-cured.

Sun-Cured

Nyasaland is the only producer of dark sun-cured in the Federation. The same variety (Western) and production methods are used for sun-cured as for fire-cured; only the method of curing differs.

Most of the production is on estates, but a large amount is also grown on Native Trust land. The average yield is

usually about 200 pounds per acre on Native Trust land and 400 to 500 pounds per acre on estates. Production of tobacco by natives is in competition with peanuts, corn, and in some areas cotton, but the demand and production of this kind of leaf is rising, and production can be expanded.

Turkish (Oriental)

The peak of Turkish tobacco production in Southern Rhodesia was in 1945-46 and 1946-47, after which there was a drastic reduction. This sharp decline has been followed by recent increases, but output is still too small to attract most buyers, who wish to export in volume.

Most of the growers handle less than 2 acres per farm, and much of the Turkish production is grown under contract to the buyer. Transplanting is carried out late in the growing season (January and February) so that the leaf is harvested after termination of the rainy season. Turkish leaf is sun-cured and therefore subject to damage if exposed to rain.

Labor.--Volume production requires a large labor supply. For that reason, government and trade representatives interested in expanding output are considering and encouraging the promotion of production by natives. But Turkish production must compete for labor not only with other agricultural enterprises but also with mining, manufacturing, and service industries, which are all expanding.

At present most of the Turkish production in Northern Rhodesia is on European farms in the western area along the railroad line from Livingstone to Lusaka and is concentrated around Choma, Kalomo, and Broken Hill.

Marketing.--Turkish tobacco is sold on the string. Individual crops are so small that the individual farmer does not grade, blend, manipulate, and bale the leaf, for the resulting quantities of a uniform blend or quality would not be adequate for filling most orders.

Burley

Almost the entire Burley crop is produced in the Lilongwe area in

Nyasaland; only a small amount is grown in the eastern part of Northern Rhodesia. This leaf is a heavy red type, used primarily for smoking and chewing tobacco. The marketing operations are carried out at auction warehouses in Limbe, Nyasaland, in the same manner as with flue-cured and dark fire-cured.

Table 2.—Tobacco production, Federation of Rhodesia and Nyasaland, by kinds and areas, averages 1935-39 and 1947-51, annual 1953-56

Kind and year	Southern Rhodesia	Northern Rhodesia	Nyasaland	Total
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Flue-Cured				
Average:				
1935-39. . . .	24,623	1,500	2,267	28,390
1947-51. . . .	82,382	5,986	2,697	91,065
Annual:				
1953.	105,967	10,324	3,735	120,026
1954.	120,874	7,985	4,306	133,165
1955.	120,559	7,606	3,694	131,859
1956.	160,000	2,000	4,300	166,300
Fire-Cured				
Average:				
1935-39. . . .	862	-	12,149	13,011
1947-51. . . .	913	-	20,976	21,889
Annual:				
1953.	368	-	24,362	24,730
1954.	604	-	23,599	24,203
1955.	277	-	14,782	15,059
1956.	320	-	26,530	26,850
Sun-Cured				
Average:				
1935-39. . . .	-	60	1,335	1,395
1947-51. . . .	-	74	3,929	4,003
Annual:				
1953.	-	20	6,286	6,306
1954.	-	11	3,299	3,310
1955.	-	-	2,324	2,324
1956.	-	(2)	3,200	3,200
Burley				
Average:				
1935-39. . . .	-	10	-	10
1947-51. . . .	-	205	1,025	1,230
Annual:				
1953.	-	107	1,691	1,798
1954.	-	101	1,949	2,050
1955.	-	157	2,017	2,174
1956.	-	(2)	2,400	2,400
Turkish (Oriental)				
Average:				
1935-39. . . .	665	15	-	680
1947-51. . . .	1,445	391	-	1,836
Annual:				
1953.	127	30	-	157
1954.	129	37	-	166
1955.	160	150	-	310
1956.	(2)	(2)	-	(2)
Total, all types ³				
Average:				
1935-39. . . .	26,150	1,585	15,751	43,486
1947-51. . . .	84,740	6,656	28,627	120,023
Annual:				
1953.	106,464	10,481	36,074	153,019
1954.	121,607	8,134	33,153	162,894
1955.	120,996	7,913	22,817	151,726
1956.	160,320	2,000	36,430	198,750

¹Includes production of northwestern Rhodesia. Figures for Northern Rhodesia are not comparable with earlier years.

²Not reported. ³For some years, totals may not equal the sum of the individual types of tobacco, owing to the inclusion in the totals of unspecified types or to incompleteness of data.

Source: Official publications of the countries concerned, reports of U.S. officials stationed abroad, and Tobacco Intelligence.

C. Exports From The Federation

Since the home consumption of tobacco is only about 7 percent of the total production, the Federation relies heavily on exports. By far the most important importers of Rhodesian tobacco are the British Commonwealth areas, especially the United Kingdom, Australia, the Union of South Africa, and British territories in West Africa. The most important non-Commonwealth importers are the Netherlands, West Germany, the Belgian Congo, Belgium, Egypt, Denmark and Sweden.

Table 3.—Exports of unmanufactured tobacco, Federation of Rhodesia and Nyasaland, averages 1935-39 and 1947-51, annual 1952-55

Country of Destination	Average		1952	1953	1954	1955
	1935-39	1947-51				
	Mil. lbs.	Mil. lbs.	Mil. lbs.	Mil. lbs.	Mil. lbs.	Mil. lbs.
United Kingdom	28.3	60.8	66.6	71.2	77.5	68.0
Australia	(1)	4.9	7.3	8.2	11.2	11.0
Nigeria	(1)	1.3	1.2	.8	2.2	1.7
Kenya	(1)	(1)	(1)	.3	1.0	.6
Union of South Africa .	2.9	3.9	1.8	1.9	1.4	11.2
Netherlands . . .	.1	2.9	9.7	7.5	8.6	6.4
Denmark	(1)	3.3	3.7	1.6	4.5	1.6
Germany (West) .	.1	.1	4.1	3.0	2.4	3.6
Belgian Congo . .	(1)	3.1	3.0	5.1	6.7	3.0
Sweden	(1)	.9	1.5	2.1	2.0	1.5
Belgium . . . . .	.5	1.0	1.4	1.2	1.5	1.8
Egypt	(1)	5.5	3.3	2.6	2.9	2.1
Others	1.5	10.6	14.3	8.4	10.6	11.7
Total	33.4	98.3	117.9	113.9	132.5	124.2

¹If any, included in others.

Source: Economic and Statistical Bulletin of Northern Rhodesia; Annual Statement of Trade of Southern Rhodesia; Annual Report on the Trade of the Protectorate-Nyasaland; Tobacco Intelligence

D. Research

The tobacco industry in the Federation is carrying on intensive research and extension programs in an effort to raise the quality and yield of tobaccos, particularly flue-cured. The Southern Rhodesia Tobacco Research Board, which had been in operation since 1950, was superseded in 1955 by the Tobacco Research Board of Rhodesia and Nyasaland.

This Board is composed of representatives of the growers and the tobacco trade. Research work is financed by assessing a fixed amount per pound of leaf sold on the auction markets.

There are two main research stations, one at Kutsaga and the other at Trelawney. Both are located near Salisbury, Southern Rhodesia. The Kutsaga station is working on the control of diseases and nematodes, breeding, soil, and fertilizer as well as other chemical investigations. The Trelawney station is doing primarily seedbed and field plot work with flue-cured tobacco, but also insect control studies and experiments on Oriental tobacco. Both stations are devoting a large part of their efforts to breeding and variety testing, especially in regard to increasing yields and improving quality.

Fertilizer has become an important factor in tobacco culture in the Federation and considerable study is under way in regard to responses of certain soils to fertilizers.

The Federal Ministry of Agriculture has extension officers in all tobacco growing areas, who work directly with the farmers. Extension officers make frequent visits to the tobacco research stations to hold discussions with research workers concerning improved methods and practices. Experimental work at the research stations covers tobacco problems from varietal development through suitability for manufacture. As tobacco is the principal export crop of the Federation, every effort is being made to provide growers with information insuring the greatest possible returns per acre.

In an effort to improve Oriental tobacco, the experiment stations have been conducting special studies on the best type to produce for export. The experiments on Oriental leaf include studies on seedbed management, rotations and cropping systems, fertilization, transplanting, varieties, and the methods of curing and handling.

Data from experiments, together with recommendations for the growers, are published annually in a booklet that is distributed to growers.